

## Human Smoking Behaviors

Inhalation & Smoke Component Absorption

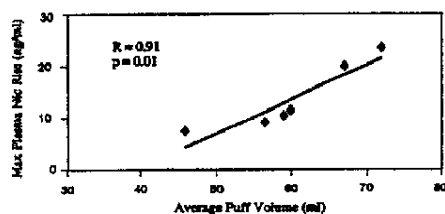
Yield  $\neq$  Intake

## Human Smoking Behaviors

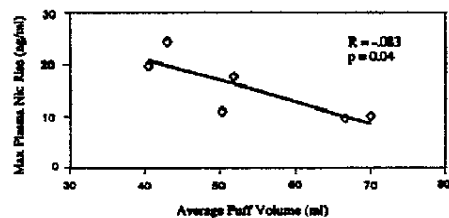
Smoking is not simply puffing.

Absorption determined by  
inhalation behavior.

Cigarette A Smokers, Smoking Cigarette A



Cigarette B Smokers, Smoking Cigarette B



## Eclipse Studies

Application of These Techniques to Eclipse

## Smoking Behavior Issues

- All data collected in laboratory sessions.  
Laboratory vs Real-World?
- Short-term, switching studies.  
Same results on smokers who  
"naturally" choose Eclipse?

## Human Smoking Behavior Studies

John H. Robinson, Ph.D.  
R. J. Reynolds Tobacco Company

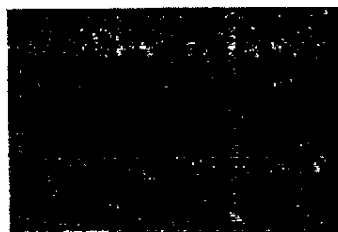
## Psychophysiology Division

How People Smoke  
How Smoking Behaviors Influence:  
Smoke Yields  
Smoke Components Absorbed  
Sensory Attribute Measures  
Acceptance

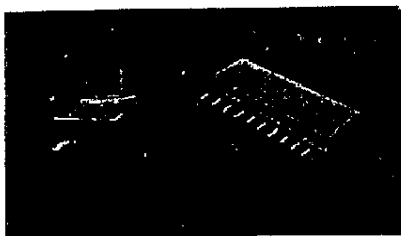
## Puff Profile Instrumentation



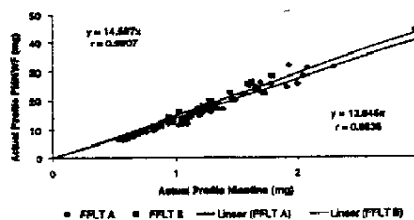
## Subject Puff Profile

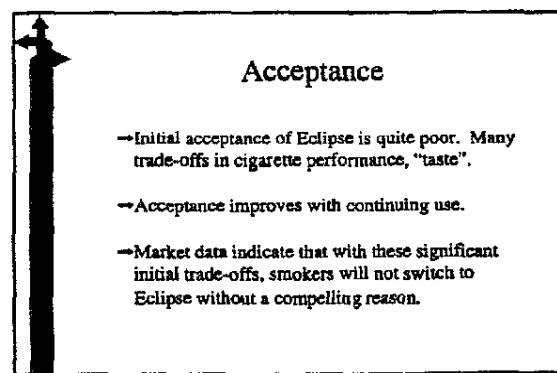
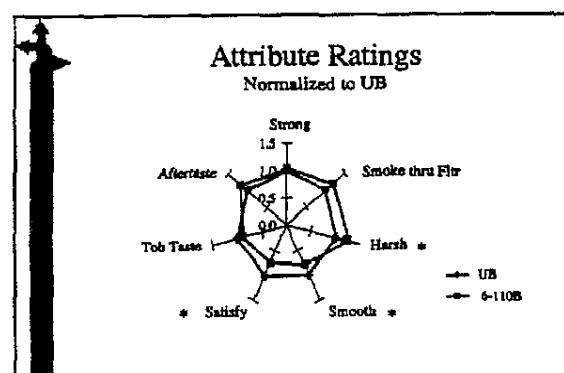
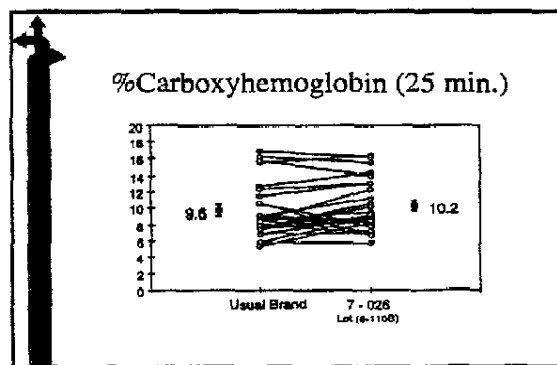
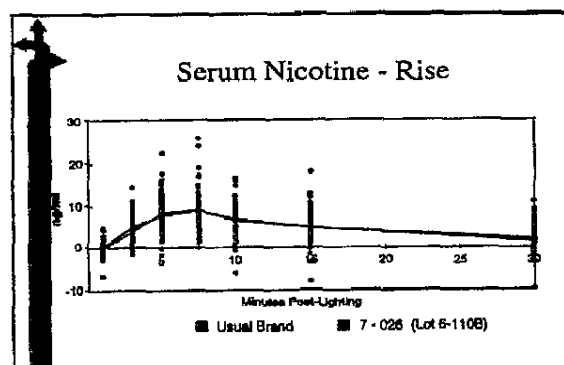
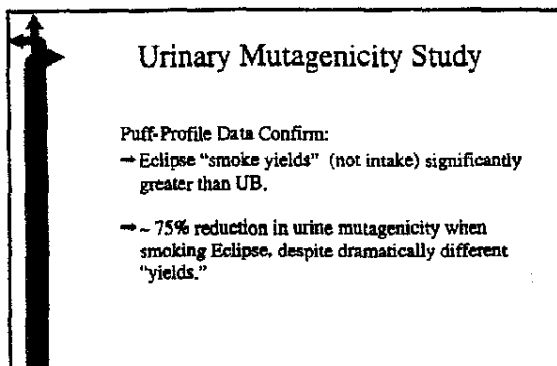
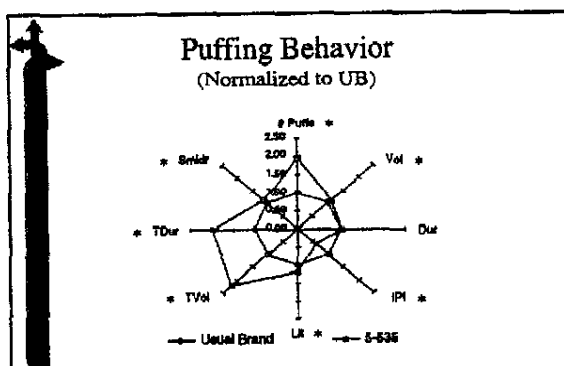


## HMSM Instrumentation



## PMNWF vs. Nicotine Actual





## Smoking Behavior Study Endpoints

- Puffing Behavior
- Cigarette Attributes
- Serum Nicotine
- Blood %COHb

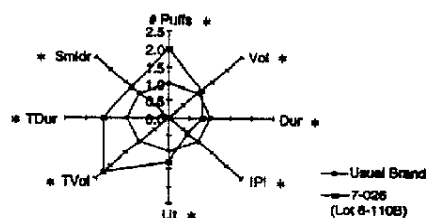
## "Typical Switching-Study" Design

- Recruit (paid) volunteer smokers
- Tested smoking usual brand (afternoon)
- Smoke Eclipse exclusively for acclimation period, usually 2 weeks.
- Re-tested smoking Eclipse. Same day of week, same time of day.

## Procedures

- *Ad lib* smoking before and after test sessions.
- Smoke one cigarette at test session.
- Questionnaire data collected post-smoking.
- Serum nicotine samples collected at -2, 0, 1, 3, 5, 7.5, 10, 15, and 30 min. post-lighting.
- %COHb samples collected at 0, and 25 min. post-lighting.

## Puffing Behavior (Normalized to UB)



## Puffing Behavior (Group Means)

	Usual Brand	7-026 <sup>1</sup>
* No. of Puffs	12.9	25.5
* Puff Volume (ml.)	52.4	58.1
* Puff Duration (sec.)	1.96	1.57
* Inter-Puff Interval (sec.)	27.7	17.1
* Time Lit (sec.)	331	431
* Total Puff Volume (ml.)	650	1438
* Total Puff Duration (sec.)	24.9	39.2
* Smolder Time (sec.)	306	392

<sup>1</sup> Lot 6-110B

## Urinary Mutagenicity Study

